



<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	1	of	13				

#### U.S. PATENT DOCUMENTS

Examiner's Initials #	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or Issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
CS	A73	4,303,651		Lindahl et al.	12-01-1981
	A74	4,486,420		Lormeau et al.	12-04-1984
	A75	4,692,435		Lormeau et al.	09-08-1987
	A76	4,784,820		Kavesh	11-15-1988
	A77	5,110,918		Casu et al.	05-05-1992
	A78	5,284,558		Linhardt et al.	02-08-1994
	A79	5,389,618		Debie	02-14-1995
	A80	5,418,259		Broos et al.	05-23-1995
	A81	5,597,811		Gruber	01-28-1997
	A82	5,922,358		Doutremepuich et al.	07-13-1999
	A83	6,004,771		Thornton	12-21-1999
	A84	6,190,522		Haro	02-20-2001
	A85	6,368,642		Kreiberg et al.	04-09-2002
	A86	6,429,302		Kennedy	08-06-2002
	A87	6,440,705		Stanton et al.	08-2002
	A88	6,569,366		Toyohara et al.	05-27-2003
	A89	6,642,363		Mooney et al.	11-2003
	A90	6,653,076		Franza et al.	11-2003
	A91	6,869,789		Liu et al.	03-22-2005
	A92	6,962,699		Pojasek et al.	11-08-2005
↓	A93	7,056,504	B1	Sasisekharan et al.	06-06-2006
	A94	7,083,937		Sasisekharan et al.	08-01-2006
	A95	7,105,334		Pojasek et al.	09-12-2006
	A96	7,110,889		Venkataraman et al.	09-19-2006
	A97	7,117,100		Venkataraman et al.	10-03-2006
	A98	2002-0122793		Liu et al.	09-05-2002
	A99	2002-0128225	A1	Liu et al.	09-12-2002
	A100	2002-0169143	A1	Sasisekharan et al.	11-14-2002
	A101	2002-0172961		Schneider et al.	11-21-2002
	A102	2003-0008326		Sem et al.	01-09-2003
	A103	2003-0008820	A1	Kwan et al.	01-09-2003
	A104	2003-0096281		Venkataraman et al.	05-22-2003
	A105	2003-0099628	A1	Liu et al.	05-29-2003

EXAMINER:	/Carolyn Smith/	DATE CONSIDERED:	11/09/2006
-----------	-----------------	------------------	------------

# EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449/A and B (modified PTO/SB/08)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	2	of	13				

CS	A106	2003-0191587		Venkataraman et al.	10-09-2003
	A107	2003-0203385		Venkataraman et al.	10-30-2003
	A108	2003-0219830		Venkataraman et al.	11-27-2003
	A109	2004-0087543		Shriver et al.	05-06-2004
	A110	2004-0091471	A1	Myette et al.	05-13-2004
	A111	2004-0091472	A1	Pojasek et al.	05-13-2004
	A112	2004-0092037	A1	Sasisekharan et al.	05-13-2004
	A113	2004-0147033		Shriver et al.	07-29-2004
	A114	2004-0197933		Venkataraman et al.	10-07-2004
	A115	2004-0204869	A1	Venkataraman et al.	10-14-2004
	A116	2004-0214228		Venkataraman et al.	10-28-2004
	A117	2005-0037376	A1	Sasisekharan et al.	02-17-2005
	A118	2005-0065738		Raguram	03-24-2005
	A119	2005-0214276	A9	Myette et al.	09-29-2005
	A120	2005-0227320	A1	Pojasek et al.	10-14-2005
	A121	2005-0233401	A1	Liu et al.	10-20-2005
	A122	2005-0233402		Liu et al.	10-20-2005
	A123	2005-0233419	A1	Pojasek et al.	10-20-2005
	A124	2005-0266067		Sengupta et al.	12-01-2005
	A125	2006-0024664	A1	Sasisekharan et al.	02-02-2006
	A126	2006-0057638	A1	Bosques et al.	03-16-2006
	A127	2006-0067927	A1	Chandrasekaran et al.	03-30-2006
	A128	2006-0067928	A1	Liu et al.	03-30-2006
	A129	2006-0078959	A1	Prabhakar et al.	04-13-2006
	A130	2006-0083711	A1	Berry et al.	04-20-2006
	A131	2006-0105430	A1	Sasisekharan et al.	05-18-2006
	A132	2006-0127950	A1	Bosques et al.	06-15-2006
	A133	2006-0154894	A1	Berry et al.	07-13-2006
	A134	2006-0177885	A1	Myette et al.	08-10-2006
	A135	2006-0177910	A1	Myette et al.	08-10-2006
	A136	2006-0177911	A1	Myette et al.	08-10-2006
	A137	2006-0182734	A1	Liu et al.	08-17-2006
	A138	2006-0183713	A1	Liu et al.	08-17-2006
	A139	2006-0183891	A1	Myette et al.	08-17-2006

EXAMINER:	/Carolyn Smith/	DATE CONSIDERED:	11/09/2006
-----------	-----------------	------------------	------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>FORM PTO-1449/A and B (modified PTO/SB/08)</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	3	of	13				

#### FOREIGN PATENT DOCUMENTS

Examiner's Initials #	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/Country	Number	Kind Code			
CS	B31	EP	0 747 705	A1	Bayer AG	12-11-1996	
↓	B32	WO	96/13606		Cancer Research Campaign Technology Limited	05-09-1996	
	B33	WO	96/28169	A1	Medical College of Hampton Roads	09-19-1996	
↓	B34	WO	99/28462	A2	Genentech, Inc.	06-10-1999	
	B35	WO	2006/089206	A2	Massachusetts Institute of Technology	08-24-2006	

#### OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials #	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
CS	C109	[No Author Listed] Aqua Peptides. Online at <a href="http://www.sigmaaldrich.com">http://www.sigmaaldrich.com</a> . Printed 7/8/2005, 3pp.	
	C110	[No Author Listed] MIT News Office. "MIT Tool Impacts Multi-Billion Dollar Drug." Online at <a href="http://www.sciencedaily.com">http://www.sciencedaily.com</a> . Printed 9/21/00, 3pp.	
	C111	ACHUR et al., Characterization of proteoglycans of human placenta and identification of unique chondroitin sulfate proteoglycans of the intervillous spaces that mediate the adherence of Plasmodium falciparum-infected erythrocytes to the placenta. J Biol Chem. 2000 Dec 22;275(51):40344-56.	
	C112	ANUMULA et al., High-sensitivity and high-resolution methods for glycoprotein analysis. Anal Biochem. 2000 Jul 15;283(1):17-26.	
	C113	BEHR et al., Quantification of isomers from a mixture of twelve heparin and heparan sulfate disaccharides using tandem mass spectrometry. Rapid Commun Mass Spectrom. 2005;19(18):2553-62.	
	C114	BELANGER et al., Molecular mass and carbohydrate structure of prostate specific antigen: studies for establishment of an international PSA standard. Prostate. 1995 Oct;27(4):187-97.	
	C115	BENGTTSSON et al., Interaction of lipoprotein lipase with native and modified heparin-like polysaccharides. Biochem J. 1980 Sep 1;189(3):625-33.	
	C116	BERRY et al., Distinct heparan sulfate glycosaminoglycans are responsible for mediating fibroblast growth factor-2 biological activity through different fibroblast growth factor receptors. FASEB J. 2001 Jun;15(8):1422-4.	
	C117	BERRY et al., Distinct heparan sulfate glycosaminoglycans are responsible for mediating fibroblast growth factor-2 biological activity through different fibroblast growth factor receptors. FASEB Journal express article 10.1096/fj.00-0661fje. Published online April 6, 2001. 19 pages.	
	C118	BOURIN et al., Glycosaminoglycans and the regulation of blood coagulation. Biochem J. 1993 Jan 15;289 ( Pt 2):313-30.	
↓	C119	BROCKHAUSEN et al., Pathways of O-glycan biosynthesis in cancer cells. Biochim Biophys Acta. 1999 Dec 6;1473(1):67-95.	

EXAMINER: /Carolyn Smith/	DATE CONSIDERED: 11/09/2006
---------------------------	-----------------------------

# EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>FORM PTO-1449/A and B (modified PTO/SB/08)</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	4	of	13				

CS	C120	CALLAS et al., Comparative pharmacologic profile of a glycosaminoglycan mixture, Sulodexide, and a chemically modified heparin derivative, Suleparoid. Semin Thromb Hemost. 1993;19 Suppl 1:49-57.	
	C121	CASU et al., Structural characterization of low molecular weight heparins. Semin Thromb Hemost. 1999;25 Suppl 3:17-25.	
	C122	CASU et al., Characterization of sulfation patterns of beef and pig mucosal heparins by nuclear magnetic resonance spectroscopy. Arzneimittelforschung. 1996 May;46(5):472-7.	
	C123	COINTE et al., Unusual N-glycosylation of a recombinant human erythropoietin expressed in a human lymphoblastoid cell line does not alter its biological properties. Glycobiology. 2000 May;10(5):511-9.	
	C124	CONRAD et al., Structure of heparan sulfate and dermatan sulfate. Ann N Y Acad Sci. 1989;556:18-28.	
	C125	DAI et al., HSulf-1 and HSulf-2 are potent inhibitors of myeloma tumor growth in vivo. J Biol Chem. 2005 Dec 2;280(48):40066-73.	
	C126	DESAI et al., Molecular weight of low molecular weight heparins by <sup>13</sup> C nuclear magnetic resonance spectroscopy. Carbohydr Res. 1994 Mar 4;255:193-212.	
	C127	DESAI et al., Specificity studies on the heparin lyases from Flavobacterium heparinum. Biochemistry. 1993 Aug 17;32(32):8140-5.	
	C128	DIETRICH et al., Enzymic degradation of heparin. A glucosaminidase and a glycuronidase from Flavobacterium heparinum. Biochemistry. 1969 May;8(5):2089-94.	
	C129	DIETRICH et al., Sequential degradation of heparin in Flavobacterium heparinum. Purification and properties of five enzymes involved in heparin degradation. J Biol Chem. 1973 Sep 25;248(18):6408-15.	
	C130	DULL et al., Lung endothelial heparan sulfates mediate cationic peptide-induced barrier dysfunction: a new role for the glycocalyx. Am J Physiol Lung Cell Mol Physiol. 2003 Nov;285(5):L986-95.	
	C131	DUTEIL et al., Identification of heparin oligosaccharides by direct coupling of capillary electrophoresis/ion-spray-mass spectrometry. Rapid Commun Mass Spectrom. 1999;13(19):1889-98.	
	C132	ERNST et al., Enzymatic degradation of glycosaminoglycans. Crit Rev Biochem Mol Biol. 1995;30(5):387-444.	
	C133	FORNO et al., N- and O-linked carbohydrates and glycosylation site occupancy in recombinant human granulocyte-macrophage colony-stimulating factor secreted by a Chinese hamster ovary cell line. Eur J Biochem. 2004 Mar;271(5):907-19.	
	C134	GACESA et al., Enzymic degradation of alginates. Int J Biochem. 1992 Apr;24(4):545-52.	
	C135	GANDRA et al., Anticoagulant sulfated glycosaminoglycans in the tissues of the primitive chordate Styela plicata (Tunicata). Glycobiology. 2000 Dec;10(12):1333-40.	
	C136	GAUCHER et al., STAT: a saccharide topology analysis tool used in combination with tandem mass spectrometry. Anal Chem. 2000 Jun 1;72(11):2331-6.	
	C137	GU et al., Purification, characterization and specificity of chondroitin lyases and glycuronidase from Flavobacterium heparinum. Biochem J. 1995 Dec 1;312 ( Pt 2):569-77.	
	C138	HABUCHI et al., Diversity and functions of glycosaminoglycan sulfotransferases. Biochim Biophys Acta. 2000 Apr 6;1474(2):115-27.	
✓	C139	HARVEY et al., Identification of protein-bound carbohydrates by mass spectrometry. Proteomics. 2001 Feb;1(2):311-28.	

EXAMINER:	/Carolyn Smith/	DATE CONSIDERED:	11/09/2006
-----------	-----------------	------------------	------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>FORM PTO-1449/A and B (modified PTO/SB/08)</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	5	of	13				

CS	C140	HASHIMOTO et al., Unsaturated glucuronyl hydrolase of <i>Bacillus</i> sp. GL1: novel enzyme prerequisite for metabolism of unsaturated oligosaccharides produced by polysaccharide lyases. <i>Arch Biochem Biophys.</i> 1999 Aug 15;368(2):367-74.	
	C141	HOVINGH et al., Specificity of flavobacterial glycuronidases acting on disaccharides derived from glycosaminoglycans. <i>Biochem J.</i> 1977 Aug 1;165(2):287-93.	
	C142	HRICOVINI et al., Structure of heparin-derived tetrasaccharide complexed to the plasma protein antithrombin derived from NOEs, J-couplings and chemical shifts. <i>Eur J Biochem.</i> 1999 May;261(3):789-801.	
	C143	HUANG et al., Low-molecular-weight heparins. <i>Hematol Oncol Clin North Am.</i> 1998 Dec;12(6):1251-81, vi-vii.	
	C144	HUIGE et al., Force field parameters for sulfates and sulfamates bases on <i>Ab Initio</i> calculations: Extensions of AMBER and CHARMM fields. <i>J Comp Chem.</i> 1995;16(1):56-79.	
	C145	HULETT et al., Cloning of mammalian heparanase, an important enzyme in tumor invasion and metastasis. <i>Nat Med.</i> 1999 Jul;5(7):803-9.	
	C146	JOHANNES et al., Sugars related to heparin inhibit tumors: Study of mice suggests the anticlotting drug may be used for cancer. <i>Wall Street Journal.</i> Jan 22, 2002. B3.	
	C147	JONES et al., Octamer sequencing technology: Optimization using fluorescent chemistry. <i>ABRF News.</i> 1998;9(2):1-24.	
	C148	KAJI et al., Lectin affinity capture, isotope-coded tagging and mass spectrometry to identify N-linked glycoproteins. <i>Nat Biotechnol.</i> 2003 Jun;21(6):667-72. Abstract Only.	
	C149	KAKEHI et al., Analysis of glycoproteins, glycopeptides and glycoprotein-derived oligosaccharides by high-performance capillary electrophoresis. <i>J Chromatogr A.</i> 1996 Jan 12;720(1-2):377-93.	
	C150	KJELLEN et al., Proteoglycans: structures and interactions. <i>Annu Rev Biochem.</i> 1991;60:443-75.	
	C151	KÜSTER et al., 18O-labeling of N-glycosylation sites to improve the identification of gel-separated glycoproteins using peptide mass mapping and database searching. <i>Anal Chem.</i> 1999 Apr 1;71(7):1431-40.	
	C152	LANDBERG et al., Carbohydrate composition of serum transferrin isoforms from patients with high alcohol consumption. <i>Biochem Biophys Res Commun.</i> 1995 May 16;210(2):267-74.	
	C153	LANDBERG et al., Changes in glycosylation of human bile-salt-stimulated lipase during lactation. <i>Arch Biochem Biophys.</i> 2000 May 15;377(2):246-54.	
	C154	LAPADULA et al., Congruent strategies for carbohydrate sequencing. 3. OSCAR: an algorithm for assigning oligosaccharide topology from MS(n) data. <i>Anal Chem.</i> 2005 Oct 1;77(19):6271-9.	
	C155	LIND et al., Biosynthesis of heparin/heparan sulfate. Identification of a 70-kDa protein catalyzing both the D-glucuronosyl- and the N-acetyl-D-glucosaminyltransferase reactions. <i>J Biol Chem.</i> 1993 Oct 5;268(28):20705-8.	
	C156	LINDAHL et al., Common binding sites for beta-amyloid fibrils and fibroblast growth factor-2 in heparan sulfate from human cerebral cortex. <i>J Biol Chem.</i> 1999 Oct 22;274(43):30631-5.	
	C157	LOPEZ et al., Microheterogeneity of the oligosaccharides carried by the recombinant bovine lactoferrin expressed in <i>Mamestra brassicae</i> cells. <i>Glycobiology.</i> 1997 Jul;7(5):635-51.	
↓	C158	LYON et al., Bio-specific sequences and domains in heparan sulphate and the regulation of cell growth and adhesion. <i>Matrix Biol.</i> 1998 Nov;17(7):485-93.	

EXAMINER:	/Carolyn Smith/	DATE CONSIDERED:	11/09/2006
-----------	-----------------	------------------	------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449/A and B (modified PTO/SB/08)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	6	of	13				

CS	C159	MA et al., Carbohydrate analysis of a chimeric recombinant monoclonal antibody by capillary electrophoresis with laser-induced fluorescence detection. Anal Chem. 1999 Nov 15;71(22):5185-92.	
	C160	MAIMONE et al., Structure of a dermatan sulfate hexasaccharide that binds to heparin cofactor II with high affinity. J Biol Chem. 1990 Oct 25;265(30):18263-71. Erratum in: J Biol Chem 1991 Aug 5;266(22):14830.	
	C161	MANZI et al., Exploring the glycan repertoire of genetically modified mice by isolation and profiling of the major glycan classes and nano-NMR analysis of glycan mixtures. Glycobiology. 2000 Jul;10(7):669-89.	
	C162	MARCINIAK, Differential role of fractionated heparin in antithrombin-III proteolysis. Blood. 1982 Mar;59(3):576-81.	
	C163	MASCELLANI et al., Structure and contribution to the heparin cofactor II-mediated inhibition of thrombin of naturally oversulphated sequences of dermatan sulphate. Biochem J. 1993 Dec 15;296 ( Pt 3):639-48.	
	C164	MCLEAN et al., Action of heparinase II on pig mucosal heparin. Proc. Of the 8 <sup>th</sup> International Symposium on Glycoconjugates. 1985. Abstract 73-74.	
	C165	MCLEAN et al., Flavobacterium heparinum 2-O-sulphatase for 2-O-sulphato-delta 4,5-glycuronate-terminated oligosaccharides from heparin. Eur J Biochem. 1984 Dec 17;145(3):607-15.	
	C166	MECHREF et al., Structural investigations of glycoconjugates at high sensitivity. Chem Rev. 2002 Feb;102(2):321-69.	
	C167	MECHREF et al., Matrix-assisted laser desorption/ionization mass spectrometry of acidic glyconjugates facilitated by the use of spermine as a co-matrix. J Am Soc Mass Spectrom. 1998;9:1293-302.	
	C168	MERRY et al., Highly sensitive sequencing of the sulfated domains of heparan sulfate. J Biol Chem. 1999 Jun 25;274(26):18455-62.	
	C169	MORELLE et al., Glycomics and mass spectrometry. Curr Pharm Des. 2005;11(20):2615-45. Abstract Only.	
	C170	MORGENSTERN et al., Chondroitin sulphate proteoglycans in the CNS injury response. Prog Brain Res. 2002;137:313-32. Abstract Only.	
	C171	MULLOY et al., Assignment of the 1H-n.m.r. spectra of heparin and heparan sulphate. Carbohydr Res. 1987 Dec 15;170(2):151-65. Abstract Only.	
	C172	NADANAKA et al., The unusual tetrasaccharide sequence GlcA beta 1-3GalNAc(4-sulfate)beta 1-4GlcA(2-sulfate)beta 1-3GalNAc(6-sulfate) found in the hexasaccharides prepared by testicular hyaluronidase digestion of shark cartilage chondroitin sulfate D. Glycobiology. 1997 Mar;7(2):253-63.	
	C173	NADER et al., Heparin sequences in the heparan sulfate chains of an endothelial cell proteoglycan. Proc Natl Acad Sci U S A. 1987 Jun;84(11):3565-9.	
	C174	NAGASAWA et al., Anticoagulant effect of low molecular weight fractions derived from a chemically modified heparin. Thromb Res. 1991 Nov 15;64(4):521-5.	
	C175	NORGARD-SUMNICHT et al., Exploring the outcome of genetic modifications of glycosylation in cultured cell lines by concurrent isolation of the major classes of vertebrate glycans. Glycobiology. 2000 Jul;10(7):691-700.	
↓	C176	PETITOU et al., Synthesis of thrombin-inhibiting heparin mimetics without side effects. Nature. 1999 Apr 1;398(6726):417-22.	

EXAMINER:	/Carolyn Smith/	DATE CONSIDERED:	11/09/2006
-----------	-----------------	------------------	------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449/A and B (modified PTO/SB/08)				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	7	of	13				

CS	C177	PETITOU et al., Synthetic oligosaccharides having various functional domains: potent and potentially safe heparin mimetics. Bioorg Med Chem Lett. 1999 Apr 19;9(8):1161-6.	
	C178	PLAAS et al., Glycosaminoglycan sulfation in human osteoarthritis. Disease-related alterations at the non-reducing termini of chondroitin and dermatan sulfate. J Biol Chem. 1998 May 15;273(20):12642-9.	
	C179	PRABHAKAR et al., Chondroitinase ABC I from Proteus vulgaris: cloning, recombinant expression and active site identification. Biochem J. 2005 Feb 15;386(Pt 1):103-12.	
	C180	PRABHAKAR et al., Biochemical characterization of the chondroitinase ABC I active site. Biochem J. 2005 Sep 1;390(Pt 2):395-405.	
	C181	RAHBEK-NIELSEN et al., Glycopeptide profiling of human urinary erythropoietin by matrix-assisted laser desorption/ionization mass spectrometry. J Mass Spectrom. 1997 Sep;32(9):948-58.	
	C182	RAMAN et al., Structural insights into biological roles of protein-glycosaminoglycan interactions. Chem Biol. 2005 Mar;12(3):267-77.	
	C183	RAMAN et al., Glycomics: an integrated systems approach to structure-function relationships of glycans. Nat Methods. 2005 Nov;2(11):817-24.	
	C184	RAMAN et al., Advancing Glycomics: Implementation Strategies at the Consortium for Functional Glycomics. Glycobiology. 2006 Feb 14; [Epub ahead of print]	
	C185	RAY et al., Glycoprotein Glycan Analysis: A new USP General Chapter. Slides of a lecture presented at the USP Conference on Biological and Biotechnological Drug Substances and Products. Crystal City, Virginia. November 20, 2003.	
	C186	RAZI et al., Structural and functional properties of heparin analogues obtained by chemical sulphation of Escherichia coli K5 capsular polysaccharide. Biochem J. 1995 Jul 15;309 ( Pt 2):465-72.	
	C187	RUSH et al., Microheterogeneity of erythropoietin carbohydrate structure. Anal Chem. 1995 Apr 15;67(8):1442-52.	
	C188	RUSH et al., Peptide mapping and evaluation of glycopeptide microheterogeneity derived from endoproteinase digestion of erythropoietin by affinity high-performance capillary electrophoresis. Anal Chem. 1993 Jul 15;65(14):1834-42.	
	C189	SAMPAIO et al., Effect of monensin on the sulfation of heparan sulfate proteoglycan from endothelial cells. J Cell Biochem. 1992 Sep;50(1):103-10.	
	C190	SASAKI et al., Site-specific glycosylation of human recombinant erythropoietin: analysis of glycopeptides or peptides at each glycosylation site by fast atom bombardment mass spectrometry. Biochemistry. 1988 Nov 15;27(23):8618-26.	
	C191	SHUKLA et al., A novel role for 3-O-sulfated heparan sulfate in herpes simplex virus 1 entry. Cell. 1999 Oct 1;99(1):13-22.	
	C192	SIMEON et al., Expression of glycosaminoglycans and small proteoglycans in wounds: modulation by the tripeptide-copper complex glycyl-L-histidyl-L-lysine-Cu(2+). J Invest Dermatol. 2000 Dec;115(6):962-8.	
	C193	SMITH et al., Archeological Preservation Research Laboratory Report 11. 1998:1-6.	
✓	C194	SOBEL et al., Heparins designed to specifically inhibit platelet interactions with von Willebrand factor. Circulation. 1996 Mar 1;93(5):992-9.	

EXAMINER:	/Carolyn Smith/	DATE CONSIDERED:	11/09/2006
-----------	-----------------	------------------	------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449/A and B (modified PTO/SB/08)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	8	of	13				

CS ↓ ↓ ↓ ↓ ↓	C195	SUGAHARA et al., Novel sulfated oligosaccharides containing 3-O-sulfated glucuronic acid from king crab cartilage chondroitin sulfate K. Unexpected degradation by chondroitinase ABC. J Biol Chem. 1996 Oct 25;271(43):26745-54.	
	C196	TOIDA et al., Enzymatic preparation of heparin oligosaccharides containing antithrombin III binding sites. J Biol Chem. 1996 Dec 13;271(50):32040-7.	
	C197	TSENG et al., Catalog-library approach for the rapid and sensitive structural elucidation of oligosaccharides. Anal Chem. 1999 Sep 1;71(17):3747-54.	
	C198	TUMOVA et al., Heparan sulfate proteoglycans on the cell surface: versatile coordinators of cellular functions. Int J Biochem Cell Biol. 2000 Mar;32(3):269-88.	
	C199	TURNBULL et al., A strategy for rapid sequencing of heparan sulfate and heparin saccharides. Proc Natl Acad Sci U S A. 1999 Mar 16;96(6):2698-703.	
	<del>C200</del>	<del>VAN KUIK et al., A 1H NMR database computer program for the analysis of the primary structure of complex carbohydrates. Carbohydr Res. 1992 Nov 4;235:53-68.</del>	
	<del>C201</del>	<del>VAN KUIK et al., Databases of complex carbohydrates. Trends Biotechnol. 1992 Jun;10(6):182-5.</del>	
CS ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	C202	VENKATARAMAN et al., A stereochemical approach to pyranose ring flexibility: its implications for the conformation of dermatan sulfate. Proc Natl Acad Sci U S A. 1994 Jun 21;91(13):6171-5.	
	C203	VENKATARAMAN et al., Fibroblast growth factors 1 and 2 are distinct in oligomerization in the presence of heparin-like glycosaminoglycans. Proc Natl Acad Sci U S A. 1999 Mar 2;96(5):1892-7.	
	C204	VIVES et al., Sequence analysis of heparan sulphate and heparin oligosaccharides. Biochem J. 1999 May 1;339 ( Pt 3):767-73.	
	C205	VLODAVSKY et al., Mammalian heparanase: gene cloning, expression and function in tumor progression and metastasis. Nat Med. 1999 Jul;5(7):793-802.	
	C206	WARNICK et al., Purification of an unusual -glucuronidase from flavobacteria. Biochemistry. 1972 Feb 15;11(4):568-72.	
	C207	WEILER et al., Heparin and modified heparin inhibit complement activation in vivo. J Immunol. 1992 May 15;148(10):3210-5.	
	C208	YAMADA et al., Structural studies on the tri- and tetrasaccharides isolated from porcine intestinal heparin and characterization of heparinase/heparitinases using them as substrates. Glycobiology. 1994 Feb;4(1):69-78.	
	C209	YAMADA et al., Isolation of the porcine heparin tetrasaccharides with glucuronate 2-O-sulfate. Heparinase cleaves glucuronate 2-O-sulfate-containing disaccharides in highly sulfated blocks in heparin. J Biol Chem. 1995 Apr 14;270(15):8696-705.	
	C210	YAMADA et al., Structural studies of octasaccharides derived from the low-sulfated repeating disaccharide region and octasaccharide serines derived from the protein linkage region of porcine intestinal heparin. Biochemistry. 1999 Jan 12;38(2):838-47.	
	C211	YANG et al., Glycosylation in human thyroglobulin: location of the N-linked oligosaccharide units and comparison with bovine thyroglobulin. Arch Biochem Biophys. 1996 Mar 1;327(1):61-70.	
	C212	YATES et al., 1H and 13C NMR spectral assignments of the major sequences of twelve systematically modified heparin derivatives. Carbohydr Res. 1996 Nov 20;294:15-27.	
	C213	ZHOU et al., Uroplakin Ia is the urothelial receptor for uropathogenic Escherichia coli: evidence from in vitro FimH binding. J Cell Sci. 2001 Nov;114(Pt 22):4095-103.	

EXAMINER:	/Carolyn Smith/	DATE CONSIDERED:	11/09/2006
-----------	-----------------	------------------	------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.





FORM PTO-1449/A and B (modified PTO/SB/08)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	10	of	13				

CS	C228	PACKER et al., Analyzing glycoproteins separated by two-dimensional gel electrophoresis. Electrophoresis. 1998; 19(6):981-988. (Abstract only).	
	C229	ROUTIER et al., Quantitation of the different oligosaccharides of human serum IgG from patients with rheumatoid arthritis: a critical evaluation of different methods. Journal of Immunological Methods. 1998; 213(2):113-130. (Abstract only).	
	C230	NOVOTNY, Capillary electrophoresis of carbohydrates. Chemical Analysis (High-Performance Capillary Electrophoresis). 1998; 146:729-765. (Abstract only).	
	C231	KLEINDIENST et al., Capillary electrophoresis of peptides and proteins in fused-silica capillaries coated with derivatized polystyrene nanoparticles. Electrophoresis. 1998; 19(2):262-269. (Abstract only).	
	C232	WANG et al., Mass spectrometric characterization and glycosylation profile of bovine pancreatic bile salt-activated lipase. Protein Expression and Purification. 1998; 12(2):259-268. (Abstract only).	
	C233	BUTTERS et al., Structural characterization of the N-linked oligosaccharides derived from HIV gp120 expressed in lepidopteran cells. Glycoconjugate Journal. 1998; 15(1):83-88. (Abstract only).	
	C234	BATEMAN et al., Characterization of protein glycoforms by capillary-zone electrophoresis-nanoelectrospray mass spectrometry. J of Chromatography. 1998; 794(1 + 2):327-344. (Abstract only).	
	C235	ODA et al., Capillary electrophoresis-based separation of transferrin sialoforms in patients with carbohydrate-deficient glycoprotein syndrome. Electrophoresis. 1997; 18(10):1819-1826. (Abstract only).	
	C236	KARLSSON et al., The glycosylation of rat intestinal Muc2 mucin varies between rat strains and the small and large intestine. A study of O-linked oligosaccharides by a mass spectrometric approach. Journal of Biological Chemistry. 1997; 272(43):27025-27034. (Abstract only).	
	C237	HOFFMANN et al., Molecular characterization of b-trace protein in human serum and urine: a potential diagnostic marker for renal diseases. Glycobiology. 1997; 7(4):499-506. (Abstract only).	
	C238	YAMADA et al., Structural changes of immunoglobulin G oligosaccharides with age in healthy human serum. Glycoconjugate Journal. 1997; 14(3):401-405. (Abstract only).	
	C239	Author Not Listed, Analysis of human serum transferrin glycoforms. LC-GC (1997), 15(4), 370.	
	C240	HSU et al., Differential N-glycan patterns of secreted and intracellular IgG produced in Trichoplusia ni cells. Journal of Biological Chemistry. 1997; 272(14):9062-9070. (Abstract only).	
	C241	IOURIN et al., The identification of abnormal glycoforms of serum transferrin in carbohydrate deficient glycoprotein syndrome type I by capillary zone electrophoresis. Glycoconjugate Journal. 1996; 13(6):1031-1042. (Abstract only).	
	C242	MORRIS et al., Gender-specific glycosylation of human glycodelin affects its contraceptive activity. Journal of Biological Chemistry. 1996; 271(50):32159-32167. (Abstract only).	
	C243	YANG et al., Capillary isoelectric focusing-electrospray ionization mass spectrometry for transferrin glycoforms analysis. Analytical Biochemistry. 1996; 243(1):140-149. (Abstract only).	
✓	C244	CHEN, Capillary electrophoretic analysis of glycoform of glycoproteins. Fushun Shiyou Xueyuan Xuebao. 1996; 16(3):68-69. (Abstract only).	

EXAMINER:	/Carolyn Smith/	DATE CONSIDERED:	11/09/2006
-----------	-----------------	------------------	------------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449/A and B (modified PTO/SB/08)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	11	of	13				

CS	C245	IWASE et al., Estimation of the number of O-linked oligosaccharides per heavy chain of human serum IgA1 by matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOFMS) analysis of the hinge glycopeptide. Journal of Biochemistry (Tokyo). 1996; 120(2):393-397. (Abstract only).	
	C246	IWASE et al., Abundance of Galb1,3GalNAc in O-linked oligosaccharide on hinge region of polymerized IgA1 and heat-aggregated IgA1 from normal human serum. Journal of Biochemistry (Tokyo). 1996; 120(1):92-97. (Abstract only).	
	C247	HONDA, Application of capillary electrophoresis to the analyses of carbohydrates and glycoproteins. Seibutsu Butsuri Kagaku. 1996; 40(3):147-154. (Abstract only).	
	C248	THORNTON et al., Respiratory mucins: identification of core proteins and glycoforms. Biochemical Journal. 1996; 316(3):967-975. (Abstract only).	
	C249	OGONAH et al., Characterization and analysis of human interferon-g glycoforms produced in baculovirus infected Spodoptera frugiperda (SF9) and Estigmena acrea (Ea) cell lines. Animal Cell Technology: Developments towards the 21st Century, [Proceedings of the Meeting], Veldhoven, Neth., Sept. 12-16, 1994. (Abstract only).	
	C250	HANISCH et al., MUC1 glycoforms in breast cancer. Cell line T47D as a model for carcinoma-associated alterations of O-glycosylation. European Journal of Biochemistry. 1996; 236(1):318-27. (Abstract only).	
	C251	BURLINGAME, Characterization of protein glycosylation by mass spectrometry. Current Opinion in Biotechnology. 1996; 7(1):4-10. (Abstract only).	
	C252	KELLY et al., Development of electrophoretic conditions for the characterization of protein glycoforms by capillary electrophoresis-electrospray mass spectrometry. Journal of Chromatography. 1996; 720(1 + 2):409-27. (Abstract only).	
	C253	KAKEHI et al., Analysis of glycoproteins, glycopeptides and glycoprotein-derived oligosaccharides by high-performance capillary electrophoresis. Journal of Chromatography. 1996; 720(1 + 2):377-93. (Abstract only).	
	C254	LEGAZ et al., Effect of polyamines on the separation of ovalbumin glycoforms by capillary electrophoresis. Journal of Chromatography. 1996; 719(1):159-70. (Abstract only).	
	C255	ROBERTS et al., An Integrated Strategy for Structural Characterization of the Protein and Carbohydrate Components of Monoclonal Antibodies: Application to Anti-Respiratory Syncytial Virus MAbs. Analytical Chemistry. 1995; 67(20):3613-25. (Abstract only).	
	C256	MACKIEWICZ et al., Glycoforms of serum a1-acid glycoprotein as markers of inflammation and cancer. Glycoconjugate Journal. 1995; 12(3):241-7. (Abstract only).	
	C257	VAN DIJK et al., a1-Acid glycoprotein (orosomucoid): pathophysiological changes in glycosylation in relation to its function. Glycoconjugate Journal. 1995; 12(3):227-33. (Abstract only).	
	C258	DE REGGI et al., The glycan moiety of human pancreatic lithostathine. Structure characterization and possible pathophysiological implications. European Journal of Biochemistry. 1995; 230(2):503-10. (Abstract only).	
	C259	PIRIE-SHEPHERD et al., Sialic acid content of plasminogen 2 glycoforms as a regulator of fibrinolytic activity. Isolation, carbohydrate analysis, and kinetic characterization of six glycoforms of plasminogen 2. Journal of Biological Chemistry. 1995; 270(11):5877-81. (Abstract only).	
✓	C260	WU et al., Characterization of neutralization epitopes in the V2 region of human immunodeficiency virus type 1 gp120 and the role of glycosylation in the correct folding of the V1/V2 domain. Journal of Virology. 1995; 69(4):2271-8. (Abstract only).	

EXAMINER:	DATE CONSIDERED:
/Carolyn Smith/	11/09/2006

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>FORM PTO-1449/A and B (modified PTO/SB/08)</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	12	of	13				

CS	C261	OGONAH et al., Analysis of human interferon-g glycoforms produced in baculovirus infected insect cells by matrix assisted laser desorption spectrometry. Biochemical Society Transactions. 1995; 23(1):100S. (Abstract only).	
	C262	JENKINS, Monitoring and control of recombinant glycoprotein heterogeneity in animal cell cultures. Biochemical Society Transactions. 1995; 23(1):171-5. (Abstract only).	
	C263	VAN DER LINDEN et al., Preparative affinity electrophoresis of different glycoforms of serum glycoproteins: Application for the study of inflammation-induced expression of sialyl-Lewisx groups on a1-acid glycoprotein (orosomucoid). Glycosylation & Disease. 1994; 1(1):45-52. (Abstract only).	
	C264	ANDERSEN et al., Monosaccharide and oligosaccharide analysis of isoelectric focusing-separated and blotted granulocyte colony-stimulating factor glycoforms using high-pH anion-exchange chromatography with pulsed amperometric detection. Glycobiology. 1994; 4(4):459-67. (Abstract only).	
	C265	MEDZIHRADESKY et al., Characterization of protein N-glycosylation by reversed-phase microbore liquid chromatography/electrospray mass spectrometry, complementary mobile phases, and sequential exoglycosidase digestion. Journal of the American Society for Mass Spectrometry. 1994; 5(5):350-8. (Abstract only).	
	C266	PEDERSEN et al., Characterization of proteinase A glycoforms from recombinant Saccharomyces cerevisiae. Biotechnology and Applied Biochemistry. 1993; 18(3):377-88. (Abstract only).	
	C267	MUELLER et al., Characterization and direct glycoform profiling of a hybrid plasminogen activator by matrix-assisted laser desorption and electrospray mass spectrometry: correlation with high-performance liquid chromatographic and nuclear magnetic resonance analyses of the released glycans. Biological Mass Spectrometry. 1994; 23(6):330-8. (Abstract only).	
	C268	DUFFIN et al., Identification and oligosaccharide structure analysis of rhodopsin glycoforms containing galactose and sialic acid. Glycobiology. 1993; 3(4):365-380. (Abstract only).	
	C269	MACKIEWICZ et al., Glycoforms of a1-acid glycoprotein as disease markers. Acute Phase Proteins. 1993; 651-61. (Abstract only).	
	C270	RUDD et al., Glycoforms modify the dynamic stability and functional activity of an enzyme. Biochemistry. 1994; 33(1):17-22. (Abstract only).	
	C271	CLOGSTON et al., Glycosidase digestion, electrophoresis and chromatographic analysis of recombinant human granulocyte colony-stimulating factor glycoforms produced in Chinese hamster ovary cells. Journal of Chromatography. 1993; 637(1):55-62. (Abstract only).	
	C272	COCO-MARTIN et al., Analysis of glycoforms present in two mouse IgG2a monoclonal antibody preparations. Journal of Immunological Methods. 1992; 155(2):241-8. (Abstract only).	
	C273	IWASE et al., Analysis of glycoform of O-glycan from human myeloma immunoglobulin A1 by gas-phase hydrazinolysis following pyridylation of oligosaccharides. Analytical Biochemistry. 1992; 206(1):202-5. (Abstract only).	
	C274	RUDD et al., Separation and analysis of the glycoform populations of ribonuclease B using capillary electrophoresis. Glycoconjugate Journal. 1992; 9(2):86-91. (Abstract only).	
	C275	TREUHEIT et al., Analysis of the five glycosylation sites of human a1-acid glycoprotein. Biochemical Journal. 1992; 283(1):105-12. (Abstract only).	
↓	C276	YIM, Fractionation of the human recombinant tissue plasminogen activator (rtPA) glycoforms by high-performance capillary zone electrophoresis and capillary isoelectric focusing. Journal of Chromatography. 1991; 559(1-2):401-10. (Abstract only).	

EXAMINER:	DATE CONSIDERED:
/Carolyn Smith/	11/09/2006

# EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<b>FORM PTO-1449/A and B (modified PTO/SB/08)</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 09/557,997		ATTY. DOCKET NO.: M0656.70055US00	
				FILING DATE: April 24, 2000		CONFIRMATION NO.: 7686	
				APPLICANT: Venkataraman et al.			
				GROUP ART UNIT: 1631		EXAMINER: Carolyn L. Smith	
Sheet	13	of	13				

CS	C277	HEFTA et al., Sequence and glycosylation site identity of two distinct glycoforms of nonspecific cross-reacting antigen as demonstrated by sequence analysis and fast atom bombardment mass spectrometry. <i>Journal of Biological Chemistry</i> . 1990; 265(15):8618-26. (Abstract only).	
CS	C278	O'HARE et al., Glycoforms of human serum proteins identified by Ricinus communis lectin. <i>Biochemical Society Transactions</i> . 1990; 18(2):323. (Abstract only).	
CS	C279	JANSKA et al., The lower molecular weight acid phosphatase from the frog liver: isolation of homogeneous AcPase III and IV representing glycoforms with different bioactivity. <i>Comparative Biochemistry and Physiology, Part B: Biochemistry &amp; Molecular Biology</i> . 1989; 92B(2):341-6. (Abstract only).	
CS	C280	ZENG et al., Characterization and analysis of a novel glycoprotein from snake venom using liquid chromatography-electrospray mass spectrometry and Edman degradation. <i>European Journal of Biochemistry/FEBS</i> . 1999 Dec; 266(2):352-8. (Abstract only).	

\*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. \_\_, filed \_\_, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

[NOTE - No copies of U.S. patents, published U.S. patent applications, or pending, unpublished patent applications stored in the USPTO's Image File Wrapper (IFW) system, are included. See 37 CFR §1.98 and 1287OG163. Copies of all other patent(s), publication(s), unpublished, pending U.S. patent applications, or other information listed are provided as required by 37 CFR §1.98 unless 1) such copies were provided in an IDS in an earlier application that complies with 37 CFR §1.98, and 2) the earlier application is relied upon for an earlier filing date under 35 U.S.C. §120.]

EXAMINER:	DATE CONSIDERED:
/Carolyn Smith/	11/09/2006

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.